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ABSTRACT

This report describes a demonstration project at Tuskegee Institute of interdisciplinary research that focused on small town development. The goals were the involvement of faculty and students in the practice of research, the stimulation of interdisciplinary thinking and planning, the involvement of faculty and students in the affairs of the surrounding community, and the enhancement of the status of college research activities through their utility for the community. This report describes: (1) the rationale for the operational objectives; (2) the methods of interdisciplinary contact; (3) the coordination, management, and budget; (4) the projects, which included architecture and survey research, a neighborhood priority study, a use of services survey, real estate assessment, an economic development seminar, and a black political study; (5) the administrative coordination, including faculty participation, curriculum development, and community implementation; and (6) the recommendations. Evaluations of the program, memorandums circulated concerning the program, and data sheets containing information about interests and concerns on the part of the community are included in the appendix. (AF)

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FINAL REPORT

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PROFESSIONAL SOCIALIZATION IN POLITICAL SCIENCE DEPARTMENTS

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Graduate Socialization Project
Department of Political Science
University of Oregon

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April, 1971

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U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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SUMMARY

This is a study of graduate student socialization in departments of Political Science. It draws on data collected in fourteen departments broadly representative of the Ph.D. granting institutions in the United States. All students and faculty in all departments were sent a questionnaire asking about their attitudes toward the profession, their program of study, their relations with others in the department, and academic values. Our objective was (1) contribution to theory about "organizations that socialize people" and (2) increasing understanding about the graduate experience in the political science profession.

We conducted our analysis at the departmental level, correlating mean values of student and faculty responses. This lets us talk about departmental differences, as well as individual differences. Our analysis (see Conclusions and Recommendations) indicates two "pure types" of departments as follows: Type I departments have a high rate of interaction between students and faculty, accurate perceptions between the two groups, high morale on the part of students, and relatively high disagreement between students and faculty on substantive and political matters. They also have higher student satisfaction with the relevance of their graduate training. Type II departments are the opposite of this in each case. We conclude that the Type I departments provide an environment that supports differences between faculty and students, unlike Type II departments where the hierarchical nature of interactions, lack of communication, and low morale leads to conformity on the part of students.

CONCLUSIONS

A. The major dimension that differentiates political science departments is the quality of relationships among students and faculty; they may be interactive and easy (at least on academic matters) or they may be the opposite.

B. The second major dimension of graduate departments in political science is the degree of student satisfaction with the learning experiences that are structured for them by the department.

C. Neither the organizational climate of political science departments nor the program relevance as seen by graduate students are correlated with the status of the department in the profession.

D. There is a marked tendency for those departments with a high rate of professional interaction between students and faculty to be places where students are satisfied with their formal program experiences.

E. Size of the graduate student body is positively related to organizational climate.

F. The faculty/graduate student ratio is positively related to organizational climate.

G. There is very little association between involvement in departmental decision-making and satisfaction with formal departmental learning experiences.

H. There is a moderate association between involvement in departmental decision-making and organizational climate.

I. Faculty perceptions of graduate students are more accurate in those departments where interaction between students and faculty is open and easy.

J. While high rates of interaction between faculty and students also increase the accuracy of student perceptions of faculty, this is not so much the case as the opposite.

K. Consensus among faculty and graduate students on political issues facing the profession is greatest in departments where relations between faculty and students are formal and closed (and student morale is low) and least in the opposite kind of departments.

L. There is no relationship between the divisiveness of faculty in political science departments and the divisiveness of students.

M. At every stage of their graduate school careers, students in departments where relations with the faculty are open and easy have greater professional awareness than students in departments where relations are closed and difficult.

N. At every stage of their graduate school careers, students in departments where relations with the faculty are open and easy are more willing to criticize what the profession is doing.

O. Second year students in all types of departments are more critical of the work being done by political scientists than students in any other year.

P. Disagreement between students and faculty on controversial political matters is least during the second year of graduate school.

This report is from a comparative study of graduate departments of Political Science that has been under way at the University of Oregon for almost two years. Its objective is different from other reports that have been published or presented to the discipline in that we are not primarily (or even very much) concerned with detailing the "state of things" at some particular time.[1] Rather, we are interested in more "theoretical" questions relating departmental structure to various end states we think are important. We hope to go beyond documenting what people are getting (or what they want) by exploring the processes whereby different "states of things" arise.

To make a systematic exploration of departmental structure the study had to encompass a range of departments, preferably representative of the variety in the discipline. Our problem at the outset was that we could only guess at this variety. Accordingly, we used two sources of information which did not identify the dimensions of internal structure we were interested in but which gave us some data on very broad differences. The first source was a brief questionnaire sent to "the departmental secretary" in forty-five departments across the country. The second was the data used by Luttbeg and Kahn in their analysis of departmental differences.[2] These were sufficient to distinguish a "behavioral-traditional" dimension and a "departmental size" dimension.[3] From the information available to us, we crudely grouped departments into four types defined by these dimensions and selected those to be studied from these types. Our financial resources only permitted a sample of fourteen departments, and within these we attempted a complete enumeration of faculty and graduate students.[4]

This data-base permits "contextual" analysis of responses by students and faculty -- analysis relating individuals to aspects of their organizational environment.[5] The present paper:

(1) identifies significant dimensions of structure in political science departments;

(2) explores some correlates of these dimensions that have to do with the experience of being a graduate student.

Our first task was to determine what structural dimensions of political science departments to include in the study. We were not interested in substantive differences at this point -- such as the behavioral/traditional distinction we had used in part to select our sample of departments -- but rather in the pattern of relationships between people within the departments themselves. The next section identifies several significant dimensions and examines the relationships among them. Subsequent sections explore processes within the types of departments that emerge from the analysis.

The Cluster Analysis

Once again we draw on McQuitty's Elementary Linkage Analysis, this time to identify dimensions of such internal structure as distinct

from its earlier use to select a sample of departments.[6] The technique -- like factor analysis -- is based on a matrix of correlations out of which it identifies "clusters" of variables that are analogous to factors. Like factor analysis, however, it requires something more than barefoot empiricism in the selection of variables to be included in the matrix. The variables we included in our matrix were suggested by our initial paradigm of graduate education, and this, in turn, was suggested by relevant literature.

(i) The Initial Model: We were working at the intersection of two literatures that, until recently, have been more or less distinct -- the socialization literature dealing with individual learning and change, and the organizational literature dealing with structure and process in complex organizations. An important new literature has developed, however, dealing with "organizational socialization," and it was from this that we developed expectations as to what variables were likely to be important.

This literature asks: what variables influence the learning processes of individuals who are the "recruits," "socializees," or "role aspirants" in "organizations that process people?" The problem is seen as one of role acquisition by Bidwell and Vreeland.

> Role learners must be taught the knowledge and the skills which the role demands. But they must also acquire the values and attitudes specific to the role and the broader moral orientations which contain and support them.[7]

The basic role distinction in this class of organizations (in which we place political science departments) is between the students who are there to learn the "knowledge," "skills," "values" and "attitudes" involved, and the faculty or "socialization agents" who pass along these things.

The most systematic attempt to organize theory about the variables influencing this process of organizational socialization is by Orville Brim and Stanton Wheeler.[8] Their point is that socialization is not a process that ends with childhood, but one that continues throughout the life cycle. Brim's contribution to their joint volume is to systematize the socialization process in terms that are relevant to childhood learning or adult learning. He focusses particularly on the nature of the relationship between agent and socializee, pointing out variations that are likely to affect the degree of learning. For example, he distinguishes between situations in which the agent exerts dominance or authority in relation to the socializee "as against being permissive or democratic or even, in some cases, submissive."[9] Similarly, he distinguishes between situations in which there is a highly affective relation and those in which there is low affectivity or "affective neutrality."[10] These dimensions define a four-fold classification of socialization situations: "high power/ high affectivity" relationships between socializee and agent are

characteristically childhood situations and "low power/low affectivity" are characteristically adult situations -- although, as he points out:

> ...the conditions under which an occupation is being learned in one instance may involve little affectivity and little difference in power, while other situations may involve considerable exercise of authority of the agent over the trainee, with more feeling of being involved.[11]

Brim also distinguishes between situations in which the learning situation is formal and informal, and between situations in which the role of learner is specified and not specified.[12] Much adult socialization takes place in situations where the organization is formal but the role of the learner is not specified; much adult learning is, therefore, "haphazard" compared to much childhood learning. Wheeler's contribution to their volume is to construct a systematic approach to adult learning situations in which learning is not so haphazard. They are characteristically in formal organizations, and the role of learner is specified; such "organizations that process people" involve learning situation that are -- in Brim's terms -- more characteristic of childhood than of adulthood.

Wheeler pays attention to such things as the group composition of individuals who pass through such learning organizations (who are "being processed") and to the variability of their social composition, but also focusses on the pattern of relationships between them and the socialization agents in the organization.[13] As he points out, some organizations "allow much opportunity for their recruits to interact with staff. Others tend to isolate the recruit so that he has little contact with the socializing agents. Similarly, in some settings recruits are quite free to interact with their fellows, while in others they are prevented from interacting by timing, the program, or enforced constraints."[14] Such patterns of interaction, he says, depend on things like sheer numbers, student-faculty ratio, and the physical design of the organization. Although little attention has been paid in research to the simple amount of interaction between recruit and agent, it seems very probable that this variable will play a central part in determining the "success" of the organization in changing the recruit; high rates of interaction make possible a substantial impact.

The importance of interaction between students and faculty seemed self-evident at the outset of the study, although we recognized the many subtle differences among possible interaction styles. But it also seemed self-evident that the student's interaction with the formal program aspects of the organization would be important in addition to his interaction with the more human aspects of the organization; after all, students have to negotiate formal barriers as well as human ones. Accordingly, we began the data collection and subsequent analysis with a paradigm in mind that related "graduate student socialization" to:

1. Interaction patterns in the department -- between students and faculty, and between students and students;

2. the formal learning experiences students were exposed to in the department.

Percy Tannenbaum and Jack McLeod have pointed out that, although "socialization" has become a central organizing concept in the behavioral sciences, there is no distinctive methodology for measuring the degree of socialization.[15] This gap is particularly glaring -- as they say -- because of the way the concept has broadened to include socialization into professional and occupational roles and assimilation into various formal organizations. They suggest a variety of devices for measuring the degree of socialization, but they all require the measurement of attitudes and values among the "role incumbents" as well as among the "role aspirants."

> For purposes of measurement, it is necessary to assess a set of attributes of the role-incumbents that are particularly relevant to that role, and to obtain corresponding measures of the same attributes on the role-aspirant group. The identification of the relevant role-incumbent groups is thereby a crucial and often difficult step. The index of degree of socialization is the similarity between the role-aspirant and role-incumbent on the selected attributes.[16]

Our data collection included both student and faculty responses so we could use a range of methods to measure degree of "communality" between agents and socializees. Our model led us to the prediction, in operational terms, that the degree of "communality" between students and faculty would vary among departments according to departmental differences in interaction patterns and departmental differences in student response to the formal learning experiences they were exposed to. As a corollary to that, we expected that the "communality" between students and faculty would increase with time in a department, and further, that this increase would be at a different rate in different kinds of departments.

(ii) The Matrix: Our data made possible analysis at the individual level (faculty and students) and analysis at the departmental level. This paper is based on the latter; we are interested in departmental differences, not individual differences. The matrix of product-moment correlations from which the clusters were derived included variables based on mean responses of faculty and students in twelve of the fourteen departments.[17]

Following the ideas outlined in the preceding section, the matrix included variables having some bearing on the following matters:

1. Interaction patterns between faculty and students (including questions about their formality, the extent of work collaboration, the access of students to faculty, student participation in departmental decision-making, and the frequency of contact with faculty).

2. Interaction patterns between students and students (including questions about the frequency of such interaction and the proportion of the student body involved).

3. Student evalpation of various aspects of their work experience (including questions about the felt relevance of the overall training given, the courses offered, research experience, and program requirements; faculty concern for graduate teaching (as seen by students and by faculty); felt competition among graduate students and felt work pressure; perception of student morale (by students and faculty).

From the matrix of intercorrelations two principle clusters were identified by McQuitty's technique.[18] They are set out diagramatically in Figure 1. We will discuss both of them and then show how the dimensions they define relate to aspects of graduate student education.

(iii) Cluster I: Organizational Climate: The primary cluster consists of five items. The "primary axis" is between the following two questions (r = .923):

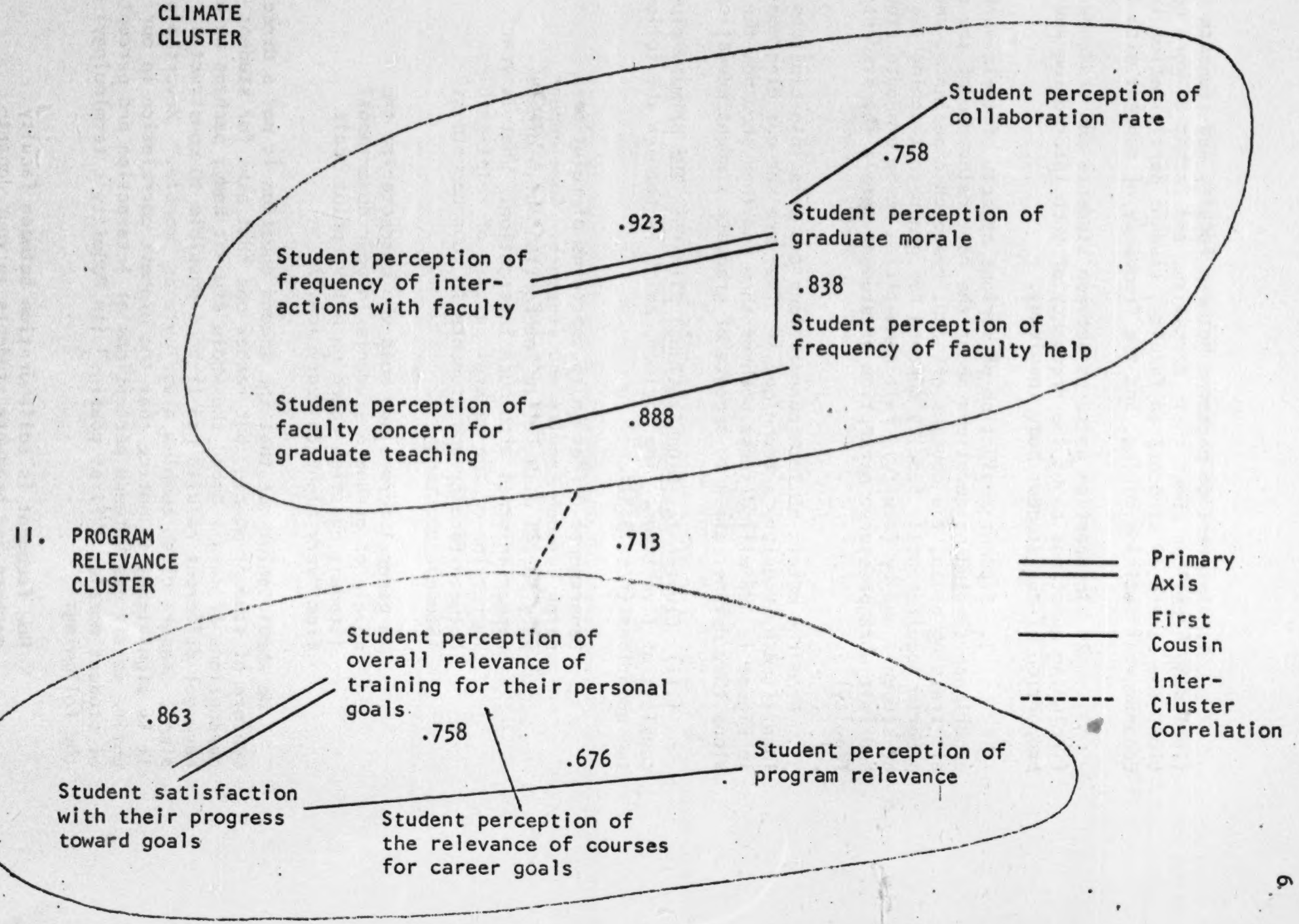
> Departments differ in the patterns of relationships between faculty and students. Some appear very formal with little interaction while others appear informal with much interaction. What is your impression of the general pattern of relationships between faculty and students in your department? (Student question)
>
> In general terms, how ould you characterize the morale of graduate students in your department? (Student question coded on a five-point scale from "very high" to "very low.")

We should point out that the second question is not a direct measure of student morale, but rather one that asks for student perceptions of morale among the whole student body; perhaps we would have got different results had it been possible to construct a simple measure of so complex a variable as "morale." Nevertheless, it is significant to notice that the highest correlation in our entire matrix was between perceptions of interaction and perceptions of student morale. "First cousins" (in McQuitty's terminology) were the following:

> How frequent is collaboration between faculty members and graduate students in your department? (Student question)

FIGURE 1

Dimensions of Department Structure


I. ORGANIZATIONAL CLIMATE CLUSTER
Student perception of collaboration rate
.758
.923
Student perception of graduate morale
.838
Student perception of frequency of faculty help
Student perception of frequency of interactions with faculty
.888
Student perception of faculty concern for graduate teaching
.713
II. PROGRAM RELEVANCE CLUSTER
Student perception of overall relevance of training for their personal goals
.863
.758
.676
Student perception of program relevance
Student satisfaction with their progress toward goals
Student perception of the relevance of courses for career goals
Primary Axis
First Cousin
Inter-Cluster Correlation

> In general, how interested do you feel faculty members in your department are in helping you with academic problems? (student question)

A further variable was linked with the latter one

> How satisfied are you with professors' concern for graduate student teaching in your department? (Student question)

The intercorrelations among all these variables were uniformly high: the lowest correlation linking any two of the variables in this set was -.701 (linking the formality of interaction with professors' concern for graduate teaching).[19] On the other hand, the correlations linking variables in this set to variables in the other two clusters were uniformly low by comparison: the highest was -.539 between formality of relationships and a question (included in the next cluster) asking about the relationship between the student's graduate training and his subsequent career. We are confident that the variables included in this set represent a distinct cluster.

We have termed this primary cluster the "organizational climate" cluster following Stanton Wheeler who suggests such a dimension is an important distinction among "socialization organizations:"

> The concept of social climate expresses something about the feelings generated by the total set of relations between staff and recruits. Relations may be warm, free, and easy, or harsh and hostile. Both within and between the major social categories there may be feelings of trust or of suspicion and lack of confidence.[20]

Remembering that we are interested in differences among political science departments (not individuals) in the process of graduate education, our first major conclusion is:

A. <u>The major dimension that differentiates political science departments is the quality of relationships among students and faculty; they may be interactive and easy (at least on academic matters) or they may be the opposite</u>.

Using the method outlined in Fruchter, we arrived at loadings for each of our departments on this dimension and the subsequent ones.[21] This allowed us to introduce the variable into the analysis along with other departmental variables, and also gave us some idea about the distribution of departments in these terms. Within our sample of departments -- and we have reasonable grounds for thinking this sample is representative -- the range of loadings was from 9.2156 to 13.1741 and there was a relatively even distribution of departments

along that continuum. The mean score was 11.0933 and the standard deviation was 1.1354. In short, our data suggest that, in terms of this "organizational climate" variable, a wide range of departments exists.

Notice that "organizational climate" implies more than just negative or positive affect between faculty and students; it also says something about student feelings on the subject of whether or not the department is a "healthy" place to attend graduate school. Students have expectations from the organization that is "processing them" and whether or not these expectations are met depends in large part on the relationship between students and the faculty. It does not seem surprising, from this perspective, that student morale is one of the principal variables in this cluster. Edgar Schein refers to the mutual expectations that superiors and subordinates in organizations have of each other as the "organizational contract" -- which might or might not be fulfilled by either of the parties.[22] Perhaps we might have termed this dimension the "organization contract" with equal justification.

(iv) Cluster II: Program Relevance: We have termed the second cluster "program relevance." The primary axis is between the following two questions (r = .863):

> How relevant do you feel your graduate training in general is to equipping you for [the career mentioned by R. as the one "being considered at present" ?]
>
> Overall, how satisfied are you with your progress toward these career goals [those being considered at present]?

"First cousins" to this axis were the following variables:

> How relevant do you feel formal program requirements are to equipping you for [the career mentioned by R. as being considered at present]?
>
> How relevant do you feel courses you have taken are to equipping you for [the career mentioned by R. as being considered at present]?

Once again the intercorrelations among these variables are uniformly high: the lowest correlation linking any two of the variables in the set was .674 (linking felt relevance of courses and overall satisfaction with progress toward goals). Within the sample of departments the range of loadings was from 6.8974 to 9.4571 -- somewhat less than for the organizational climate cluster -- and the distribution was evenly spread along the continuum. The mean score was 8.0575 and the standard deviation was .7051.[23] The correlations linking these variables with those in the first cluster were uniformly low, with the exception of the linkage between the

general relevance of graduate training and satisfaction with professors' concern with teaching which was .821.

We have called this cluster the "program relevance" cluster because all the variables included have to do with student evaluation of their formal learning experiences as preparation for their chosen careers.[24] Thus it is a different kind of variable from the organizational climate variable which -- since it deals with interaction between students and faculty -- may properly be regarded as a structural variable. Graduate school provides graduate students with formal learning experiences, and the "program relevance" cluster distinguishes departments in terms of student satisfaction with those experiences.

B. The second major dimension of graduate departments in political science is the degree of student satisfaction with the learning experiences that are structured for them by the department.

Correlates of Organizational Climate

Unfortunately, we do not have any reliable measure of "output" variables such as the "quality" of the "organizational product" -- if, indeed, such a thing could be measured. One measure that is available, however, lets us test whether the two dimensions that emerge from the cluster analysis are related to status in the profession. The American Council on Education provides a ranking of graduate programs that is based on their reputation among political scientists in different departments. The latest version allowed us to compare the rankings on our variables with a status ranking measured about the same time.[25] Our first conclusion is:

C. Neither the organizational climate of political science departments nor the program relevance as seen by graduate students are correlated with the status of the department in the profession.

The rank-order correlation (Rho) between organizational climate and the A.C.E. rankings is .007; whether or not students and faculty interact freely and easily is not related to the professional status of the department. The Rho between program relevance and the A.C.E. rankings is -.112. Evidently, when assessing the relevance of their educational experience, students are not influenced by any perception of their department's "status" within the profession. Students can be very satisfied with a program that is low in the national standings or unsatisfied by one that is high in those standings.[26] We should remember that the A.C.E. rankings are based on reputation within the profession, and that reputation, in turn, is largely determined by the scholarly output of a department. These findings do not necessarily mean that departments with high research activity suffer because of that in the quality of the graduate experience; but they do mean that such activity has little to do with graduate student feelings that their educational experience is worthwhile. A student selecting a department for graduate work and wanting one where he will be satisfied by the quality of his educational experience should not necessarily

follow the national rankings.

This conclusion should be qualified by the possibility that students in high status departments may have higher expectations of their graduate experience, and therefore might be highly dissatisfied in a lower status department. In other words, students selected by a department might be easier for that particular department to satisfy. We suspect, though, that the reason for this low correlation between status of department and program relevance is that students are more oriented toward what is happening in their own department than toward the status of that department in the profession; they are professional locals, not professional cosmopolitans. This is borne out by the correlation between organizational climate and program relevance which is .713. Although the two clusters are distinct:

D. <u>There is a marked tendency for those departments with a high rate of professional interaction between students and faculty to be places where students are satisfied with their formal program experiences.</u>

This does not mean that students' local orientations are based on ignorance about such "cosmopolitan rankings." We asked students the following question:

> How would graduate students in your department "stack up" with graduate students from the best departments in the country?

This does not measure exactly their perception of their department's status, but it is close to that. The Rho between the A.C.E. rankings and mean student responses on this question was .843. Students are evidently very much aware of the status of their department in the profession; it is just that they do not base evaluations of their own educational experience on that understanding. It is interesting to compare students and faculty in this respect. As we might expect, faculty are no less accurate than students in their perception of their standing in the profession: the correlation between the A.C.E. ranking and the faculty version of the question about the relative strength of the departmental graduate students is .804. But while the ranking is only slightly related to morale of students, unrelated to organizational climate (of which student morale is one aspect), and unrelated to program relevance, the correlation between faculty perception of their own morale and the A.C.E. ranking is .585. In other words, while local circumstances seem related to student feelings of satisfaction, faculty feelings of satisfaction seem more tied to cosmopolitan concerns.[27]

An argument often heard among political scientists is that smaller departments would result in better relations between graduate students and faculty and, therefore, a better educational experience for students. This is consistent with the proposition from the organizational literature that interaction patterns in an organization are

dependent on the number of people in the organization; the larger the organization the more fragmented are relations among people within it and the more bureaucratic are organizational processes.[28] In the case of political science departments, the argument can be translated as follows: if faculty have the opportunity for interaction with students that interaction will take place; opportunity depends in a straightforward way on the number of graduate students, or, more exactly, on the ratio between students and faculty.

Unfortunately, we do not have any data on the size of the undergraduate body at our various institutions. Undergraduates take up faculty time as well as graduates and it is quite possible, for example, to have a low faculty/graduate student ratio but a high faculty/all-student ratio. Similarly, some departments make a distinction between graduate faculty and undergraduate faculty, and our data do not reflect that. Nevertheless, we can report that:

E. Size of the graduate student body is positively related to organizational climate;

F. The faculty/graduate student ratio is positively related to organizational climate.

The correlation (Rho) between size and climate is .204; that between faculty/graduate ratio and climate is .227. These are not inconsistent since the bigger departments in our sample are also those with a better faculty/graduate ratio. Within the limits we have pointed out, there is some support for the hypothesis from organizational theory that the opportunity for faculty-student interaction is related to actual interaction between the two groups. However, the weak correlation suggests that many other things must be taken into account. Perhaps in large departments it is easier for students to have relaxed relationships with some faculty members simply because there are more available; similarly, small departments might be able to maintain hierarchical relationships more easily than large ones if the faculty are so minded. The question which we cannot answer here, of course, is what makes them so minded.

A debate is continuing about the appropriate level of student involvement in university decision-making processes. Earl McGrath argues from the normative position that, in free societies, "all . those affected by a social policy have an inalienable right to a voice in its formulation."[29] Similarly, contemporary students are unrivaled in their "idealistic commitment to social reform" and in that commitment lies a great potential for thoughtful reconstruction of higher education that should not be lost. Because of their student status, they are the group most aware of current deficiencies in curricular offerings and are in a good position to judge and offer help in improving things.

Within the Political Science profession a similar argument has been put by the Committee for an Exploratory Study of Graduate Education.[30] The authors of this study collected data from graduate students across

the country showing that students wanted greater involvement in decision-making and drew the same normative conclusion as McGrath: students ought to have greater involvement. The case against has been argued, in similar normative terms, by John Bunzel.[31] Bunzel reasons that the relationship between students and faculty "is not completely or inherently equal, nor should it be."[32] Political and educational decision-making are not the same, and it would be a serious debasement of academic decision-making to equate the two. Bunzel believes that what occurs on our campuses must remain separate from what occurs in the wider society.

These normative arguments leave us unclear as to the most likely consequences of increased student involvement for a political science department of increased student involvement, and once again we must turn to the organizational literature for cues. The proposition gaining most widespread support is that involving "workers" in "management" decisions increases their morale and sense of job satisfaction. Having some say in the affairs of the work situation, says Tannenbaum, "...contributes to a worker's sense of involvement in his work and in the organization, as well as his identification, personal commitment and feeling of responsibility on the job."[33] Argyris argues that there is an inherent conflict between the demands of a "mature" personality and an organization to which he belongs. This is because such personalities demand control over their own behavior and organizations -- which are rationalized means toward some organizational product -- also demand control over some part of that behavior.[34] He suggests that one way in which this conflict can be reduced (but not eliminated) is by genuine involvement of the workers in the decisions about their own behavior; he warns that such involvement must be more than just symbolic since such an empty gesture would only serve to emphasize the impotence of workers vis à vis the organization. We can expect that the demand for "worker" participation will be even greater in organizations, such as political science departments, where the "product" is the worker himself. If these writers are correct, we can also expect that a consequence of genuine participation will be higher student morale and greater satisfaction in the role of student.

We asked the following questions about student participation in departmental decision-making:

> Have you ever taken part in departmental committee meetings?
>
> Have you ever consulted with faculty members on departmental matters?

We constructed a simple index by ranking departmental means for each of these questions and summing the rank scores for each department. This gave us a department-level variable which we call the "active-passive" dimension: it measures the extent to which graduate students have an active role in a department's decision-making processes. We

secured a useful indicator of construct validity by objective data on decision-making rules in each department. We found, with only one exception, that schools where students reported a high frequency of "participation" in departmental committees, they actually could vote in those committees. Participation, that is, usually does imply decision-making power.

Interestingly enough, however, this decision-making power does not appear to have much impact on students' satisfaction with the learning experiences they have to negotiate -- the very thing they have most reason to want to influence. The correlation (Rho) between this active-passive dimension and the program relevance dimension is only .161, hardly enough to support the proposition that students are very successful in exercising this (admittedly very limited) decision-making power. Of course, we are measuring these things at one point in time, and we do not know how much improvement in program relevance has resulted from this power. Nevertheless:

G. <u>There is very little association between involvement in departmental decision-making and satisfaction with formal departmental learning experiences</u>.

On the other hand, the Rho between this active-passive dimension and organizational climate is .581:

H. <u>There is a moderate association between involvement in departmental decision-making and organizational climate.</u>

We will discuss the problem of causal inferences from this kind of data in the final section, but we can point out here that this finding can be satisfactorily interpreted with either variable as the dependent variable. On the one hand, participation in formal decision-making seems a likely consequence of a situation where there is open easy interaction between faculty and students; the demand for participation might be more easy to make -- and more easy to respond to -- under such happy conditions. On the other hand, we have already cited Argyris's point that genuine participation in organizational decision-making is likely to reduce worker alienation. We could conclude from these data that, while students don't influence anything much by their participation, that participation does make them feel better toward the organization. But, of course, we have also cited Argyris's point that participation that does not involve real power is likely, in the long run, to make things worse.

<u>Communication and Consensus</u>:

The preceding discussion leads us to the following related hypotheses:

1. That departments where the students and faculty interact freely on professional matters (that is, departments high in organizational climate) will have better communication between faculty and students;

2. That departments where the students and faculty interact freely on professional matters will have greater consensus between faculty and students on professional matters.

The first hypothesis is based on the simple assumption that interpersonal contact leads to the flow of accurate information between members of an organization. Such contact is not a necessary condition for accurate communication but we would expect it to be a sufficient condition. The second hypothesis is based on our earlier model which assumed that learning processes in organizations such as these depended, in part, on interaction between the socialization agents and the recruits or socializees. This is consistent with Stanton Wheeler's discussion of interaction and has a great deal of prima facie plausibility.

Both of these hypotheses translated into operational terms quite easily. We asked faculty several questions about the graduate students and the graduate students several questions about the faculty. These perceptual questions were matched, in each case, by questions asked of the group itself about the same matter. It was therefore possible to correlate perceptions with the actual state of things within the perceived group. Two matters were particularly important. The first was the "morale" of the students and faculty respectively; if good communication did nothing else, we would expect it to pass on awareness of contentment or discontentment in a group. The second was the work pressure felt by the graduate students. Faculty, of course, assign work for students to do; adequate feedback to faculty about how students respond to that work is important if the educational function of the organization is to be achieved, and that implies good communication processes. When perceptions about a group match what the group says about itself we have an operational definition of good communication; when there is a wide divergence we have an operational definition of poor communication.

We correlated organizational climate with such difference scores to test the hypothesis that communication is better when there is easy professional interaction between students and faculty. The correlations were moderate in each case: for faculty perception of student morale the Rho was -.473 and for faculty perception of student work pressure the Rho was -.364. We should point out that the negative sign comes from the larger differences between faculty and students being in the high organizational climate departments.

1. Faculty perceptions of graduate students are more accurate in those departments where interaction between students and faculty is open and easy.

A common finding in empirical studies of organizations is that information flows more readily downward than upward.[35] In the case of political science departments, this would lead to the expectation that when interaction does take place between faculty and students, faculty pick up cues about the students more readily than the students do about the faculty. This is borne out in fact: the Rho is -.236 between

organizational climate and the difference between student perceptions of the faculty morale and faculty morale itself. Of course, we should admit the possibility that, since "faculty morale" is operationally based on faculty perceptions of themselves, students are in fact more accurate judges of where the faculty are than the faculty themselves, but the finding does justify the tentative conclusion:

J. <u>While high rates of interaction between faculty and students also increase the accuracy of student perceptions of faculty, this is not so much the case as the opposite</u>.

Consensus can be reached in a political science department in several ways. Faculty can recruit students into the department who already agree with them when they come; students and faculty can agree on a matter by chance processes unconnected with their joint habitation of the same organization; students can bring faculty to their way of thinking, or, finally faculty can bring the students to <u>their</u> way of thinking. Many of the measures of what Tannenbaum and McLeod call "the degree of socialization"[36] are based on the assumption that only the latter process is working; it is assumed that, since there is a formal distinction between "teacher" and "student," all agreement between the two groups comes about because teachers teach students. Like most people studying "organizations that process people," we are naturally most interested in this kind of process, but we should recognize that our measure of agreement between faculty and students does not distinguish it from alternative processes that are consistent with evidence of consensus.

The data provide us with evidence of such consensus, but it does not relate to organizational climate in the way we expected. We asked two questions:

> How do you feel about political scientists doing classified government research?
>
> How do you feel about the Caucus for a New Political Science?

Once again, we correlated the organizational climate variable with the difference between faculty and student scores in each department. For the classified research question the Rho was .400 and for the Caucus question it was .205. There is support here for the following proposition:

K. <u>Consensus among faculty and graduate students on political issues facing the profession is greatest in departments where relations between faculty and students are formal and closed (and student morale is low) and least in the opposite kind of departments</u>.

Notice that the correlation coefficients conceal the <u>actual</u> positions taken by the students and faculty in each department. They are based on the absolute differences between the two groups, and do not tell whether students or faculty have more favorable attitudes

in either case. The only noteworthy finding of this order, however, has to do with the direction of faculty and student attitudes toward classified research. To our complete surprise, with the exception of only one department, students were -- on the average -- significantly more willing to support classified research than their professors. We were surprised, of course, because of the much commented-on radicalism of contemporary students, but perhaps the data should be taken more as a reflection of the greater centrality of the issue for faculty than for students; perhaps students are simply not so aware of the issue as faculty.[37]

For several reasons, these data do not disconfirm the hypothesis that interaction between faculty and students promotes the learning process in political science departments and similar organizations. We have already pointed out that consensus between the two groups can come as a result of several processes, only one of which is student learning. The data might also be interpreted to say that the faculty in interactive departments teach their students critical ability, and that this learning results in disagreement with their mentors on important matters.

The data are, nevertheless, interesting because of the picture they paint of different kinds of political science departments. Dealing for the moment in "pure types," it seems that one type of department is formal with little interaction between students and faculty, has little understanding between faculty and students -- and has a student body that tows the faculty line on important political matters. Another type of department is informal and interactive, has good mutual understanding between students and faculty -- and has a student body that is willing to differ with the faculty on important political matters.

We cannot argue from the data that interaction between faculty and students improves the learning process in strict academic terms, but we can argue that it produces an environment that supports honest differences between them on substantive matters. Communication between groups increases mutual awareness (even if that increase is greater for some groups than others), and makes behavior easier to predict. The ability to predict faculty behavior is vital for graduate students since their futures normally depend on continued faculty approval; graduate life, if not solitary, poor, nasty, brutish and short, is at least insecure and uncertain. In the absence of good communication between students and professors -- such as comes from easy and open interaction between them -- a probable response is conformity, at least on controversial matters. Yet this conformity is exactly what critics of professional training in the social sciences deplore. In reducing and controlling their interaction with students, the faculty might be making life easier for themselves without reducing the amount students learn, but it does seem likely that they are also reducing student willingness to think independently and, therefore, creatively.

This analysis relates to conflict between students and faculty on substantive matters. An equally interesting matter, however, relates to conflict among the students themselves and among the faculty. It is a common observation that faculty in some departments have substantial differences among themselves. It is possible for us to investigate the extent to which such faculty differences are paralleled by differences among the students and, further, to investigate the circumstances under which conflict patterns are parallel in the two groups. The standard deviation of responses within a group is a handy measure of the breadth of differences between group members; the larger the standard deviation, the greater the differences. Thus, by ranking departments according to the size of standard deviations for each group and correlating the rankings we have a measure of the extent to which conflict patterns in the two groups go together within departments.

"Conflict" within an organization is normally a multidimensional matter; members differ among themselves on many issues and sometimes the resultant cleavages define homogeneous groups where members agree on all things but sometimes the cleavages cut across such subgroups. Departments might be "conflictual" on a single matter but "consensual" on everything else, and our main interest is in the overall divisiveness of a faculty. Consequently, we have taken the mean of standard deviations for four questions within the faculty and student body separately. We interpret this as a summary measure of divisiveness when several matters on which group members can differ are taken into account. The questions have to do with the relevance of contemporary research, satisfaction with questions being asked in the leading journals, approval of classified research, and feelings about the Caucus for a New Political Science. Our first finding is:

L. There is no relationship between the divisiveness of faculty in political science departments and the divisiveness of students.

The Rho is .071; we can conclude that, generally, disagreements among the students are not a reflection of disagreements among faculty. Nevertheless, the preceding discussion about disagreement between faculty and students suggests that there might be some particular circumstances when the two conflict patterns are parallel. Specifically, we might expect that in departments where interaction between faculty and students is open and easy, disagreements tend to parallel each other, but that in the opposite kind of departments students and faculty are more self-contained in their disagreements.

In order to test this, we have operationalized the concept of "pure types" in scalar terms. Our data show that several important dimensions of departments are quite highly correlated, making it reasonable to think of a single continuum comprising a "bundle" of variables. Departments at either end of this continuum are, of course, exceptions and most lie somewhere in between; but by examining the patterns within such extreme cases we can further explore the hypothesis that integrative departments make conflict possible.

We identified such "pure types" in a simple scalogram manner. Departments were assigned a + or a - depending on whether they fell above or below the mean on each of our three structural measures: organizational climate, program relevance, and the active-passive dimension. By chance, three departments were "pure types" at both the high and the low end of the scale. Type I departments are those that are high in organizational climate, program relevance and political activity among graduate students; Type II departments are low in each of these.

Quite obviously, a Rho computed on three cases must be taken with extreme caution, but the findings are suggestive enough to be reported. For Type I departments the correlation is perfect, suggesting that, in well integrated departments, conflict patterns within the student body and among the faculty are broadly parallel; for Type II departments, on the other hand, the Rho is -.50, suggesting that in poorly integrated departments students and faculty differ among themselves in different ways. Using Schattschneider's term, it seems that conflict is more "contagious" in departments where faculty and students interact as a single social unit.

Cohort Analysis

Socialization, whether of graduate students or any other group, is a process that takes place through time; by definition, it involves change in the individual being socialized. This section of our analysis explores the possibility that students at different stages of the graduate school "processing" relate differently to the "processing" experience and to the faculty.[38]

Our first interest was simply the growth of "professional awareness" by year in the program in our departments. We expected that knowledge about professional things -- important matters occupying the attention of the discipline -- would increase with year in graduate school. Our second interest was change in "professional values" by year in the program, particularly values about the intellectual substance of the discipline. We expected that acceptance of such values would increase by year as students became progressively "professionalized."

Reintroducing Type I and Type II departments, however, makes possible somewhat more sophisticated predictions. In any type of department, contact with faculty is a major way in which students come into "contact" with the profession itself; faculty are, in a sense, the "representatives" of the profession in their own departments. Type I departments are places with relatively free and open interaction between faculty and students, and Type II departments are the opposite. It is reasonable to expect, therefore, that awareness of "professional events" will be higher in Type I departments and also that acceptance of "professional values" will be greater there. Perhaps we can also predict that the growth of both of these things will be more rapid in Type I departments since "channels of communication" to the profession are more readily available.

We used two questions to investigate "professional awareness" and "professional values." They are, respectively:

> Are you aware of the Caucus for a New Political Science?
>
> How satisfied are you with the questions political scientists are asking at present -- as reflected in the leading journals?

Table 1 reports, in percentage terms, "awareness" of the Caucus by year in the program for the two types of department. Because of the limited number of cases beyond the third year in each type, we have collapsed years three and beyond into a single category. The data record, first, a between-year difference in both types of department: students become increasingly aware of this particular "professional event" the longer they are in the program. More significant, however, is the difference within each year between the two types of department. It is a remarkably constant difference of about fifteen percentage

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Insert Table 1 about here

---

points. We suggested that the growth of professional awareness might be more rapid in Type I departments, but the rate of growth is about the same in each case. The difference appears by the first year and is maintained throughout subsequent years. We can conclude that:

M. At every stage of their graduate school careers, students in departments where relations with the faculty are open and easy have greater professional awareness than students in departments where relations are closed and difficult.

The mean A.C.E. ranking for Type I departments is 3 while the mean ranking for Type II departments is 7.5. One could argue that higher status departments are, because of that status, more "hooked into" the "professional network" and that students in those departments are more likely to have other linkages to the profession than their faculty. Similarly, higher status departments might recruit more professionally oriented students who are also likely to "bypass" their faculty. However, the status difference is not great between the two types, and at least two of the Type II departments have substantial national reputations. We do not think this status difference is sufficient to seriously qualify the conclusion.

Table 2 reports mean differences in student "satisfaction with the questions political scientists are asking" by year and type of department. Once again there is a remarkably constant difference within each year by type of department. First, second and third-plus year students in Type II departments are significantly more likely to approve of what the profession is doing than their cohorts in Type I departments. This cannot

be readily explained in communication terms, but does seem to be quite consistent with our earlier suggestion that ready interaction between students and faculty makes possible student differences with the faculty. Not only are students in Type II departments more ready to conform to the political attitudes of their faculty -- as was argued in the earlier analysis -- but they are also more ready to conform to the research values of the wider profession. There is no reason to advance a different explanation for this particular kind of conformity: students in Type I departments are in a social situation that frees them from many of the anxieties attendant on non-conformity elsewhere.

Insert Table 2 about here

The second suggestive fact from Table 2 is the dip in "satisfaction" among second year students in both types of departments. Cycles of disillusionment and disappointment have been noted among students undergoing professional training by several researchers. Virginia Olesen and Elvi Whittaker find that such disillusionment appears most frequently in the first year of training for student nurses: "...it begins to appear as if the pacing of the depressions might have something to suggest with regard to socialization. They seem to appear at specific times throughout the student's education..."[39] Charlotte Towle reports feelings of come-down among students of social work and attributes this to feelings of incompetence.[40] Howe notes feelings of anxiety and inadequacy among students especially at the end of their first year of study.[41] The consistency of the dip in both types of political science department suggests the presence of a similar cycle of disillusionment. We suspect that the relatively high satisfaction among students in their first year comes from early awe and respect for the values of the profession they are just entering. The rise of criticism in the second year might be attributable to anxiety as other writers suspect, or it might be attributable to familiarity that breeds contempt; in any case, it seems that the second year is a crisis in the professional education of political science students. Higher levels of satisfaction among third year students and beyond can be attributed to growing professional identity, or, perhaps, to the fact that students who accept the worth of what they are doing are most likely to stay in graduate school at all. We should also point out that, in most departments, the second year divides students completing the M.A. and students working on their Ph.D.'s, it is not surprising that students working toward a Ph.D. are less critical of what political scientists do since the discipline is more likely to be their future profession.

N. At every stage of their graduate school careers, students in departments where relations with the faculty are open and easy are more willing to criticize what the profession is doing;

O. Second year students in all types of departments are more critical of the work being done by political scientists than students in any other year.

This analysis has suggested that relations between students and faculty are central to the process of professional education in political science departments. Accordingly, we have extended the cohort analysis to explore the extent to which students at different stages of their graduate programs differ from the faculty in their various institutions. Once again, because of their theoretical significance, we have distinguished between Type I and Type II departments. Students in some departments might be exposed to different professors at different stages of their graduate careers, but exposure (formal and informal) is likely to be random for most students. We took the mean faculty responses on two questions in each school and subtracted them from the mean of student responses in each year within the same department. We interpret the difference as a measure of disagreement between the faculty and students at various stages of the program. We used the mean (of absolute differences) as a summary measure of disagreement for the schools in each of the two types. Table 3 reports the mean differences between faculty and students by year in the program for the two questions. The two questions deal with classified research and the Caucus for a New Political Science.

The pattern of conformity on these two matters elaborates nicely on the tensions inherent in the second year of graduate school. We suggested that this period was one of anxiety and disillusionment, and our data showed that students in both types of departments were more critical of the profession's work than either before or after. In both types of departments disagreement on the two present questions is least in the unhappy second year -- with the single exception of attitudes toward the Caucus in Type I departments where students and faculty are very slightly more consensual than during the second year. It seems that the malaise of the second year finds one expression in disillusionment with things professional; it finds another expression in conformity to faculty values on controversial political matters.

P. Disagreement between students and faculty on controversial political matters is least during the second year of graduate school.

Insert Table 3 about here

Conclusions and Recommendations

From the preceding analysis, one polar type of political science department (Type I) has the following characteristics: such departments are highly interactive, and academic and intellectual interaction between students and faculty is open and easy; students and faculty each have a good understanding of "where the other group is at" although

the faculty's perception of students is somewhat better than vice versa; the students feel free to differ with the faculty on professional matters and they do so differ; and, finally, the students generally approve of the various educational experiences provided for them by the department.

The second type of department (Type II) has the following characteristics: relations between students and faculty tend to be hierarchical, formal, and non-interactive outside of classroom situations; students and faculty have little knowledge of the other; the students tend to be uncritical of their profession and more ready to conform to the expressed views of their faculties; and, despite their submissiveness on many intellectual things, they tend to be critical of their general educational experience in graduate school.

The idea of pure types implies that very few, if any, departments fit either of these models perfectly; no department is perfectly integrated, has perfect communication and mutual understanding between students and faculty or -- most unlikely of all -- has students who are quite uncritical of their educational "processing." All departments have students who are "outside the run of things" and are more discontented than others. Nevertheless, it does seem possible to distinguish departments in terms of such a broad continuum, and the departments we classified Type I and Type II approach either end of that continuum.

Although this study falls short of demonstrating that students "processed" by Type I departments are, in the long run, more productive scholars and better teachers than students "processed" by Type II departments, we feel that there are grounds for arguing:

1. That the three or four years Type I students spend in graduate school before their "induction" into the profession are more enjoyable and exciting;

2. That it is more likely students from Type I departments will develop the habit of independent and critical thinking which can, in the long run, only benefit the discipline.

While our data let us identify such different types of departments, they have severe limitations for explaining the process by which departments become one thing or the other. We only have twelve departments, and many of the interesting variables are so highly correlated that it is impossible to separate their "effects" in analytic terms. Neither the traditional cross-cut method nor the Simon-Blalock method using partial regression coefficients would yield reliable results.

There are also theoretical reasons why cross-sectional data such as that we have used might be unsatisfactory for giving causal insights. The model of organizational change that seems most satisfactory as an explanation of our data is suggested by Maruyama. It

involves what he calls deviation-amplifying and deviation-counteracting feedback networks.[42] He argues that cybernetics has traditionally been concerned with only one type of feedback loop: the type where a system of interacting parts moves toward some stable equilibrium. He calls this "the first cybernetics." "The second cybernetics" involves feedback loops that move a system of interacting parts away from such a stable equilibrium. In some situations: "Whatever the change, either an increase or a decrease, amplifies itself...In a loop, therefore, each element has an influence on all other elements either directly or indirectly, and each element influences itself through other elements. There is no hierarchical causal priority in any of the elements."[43] It seems very likely that political science departments -- and similar organizations -- change like this. Using Maruyama's term, some "initial kick" sets the system moving in a particular direction and its internal logic takes over to maintain the momentum; in short, some initial event starts things off and the first movement continues and expands itself.

This movement might be in the direction of Type I or Type II situations. For example, one or two faculty members behaving in an open and accessible manner might increase mutual awareness between students and faculty; this might lower anxiety for some students which might, in turn, improve the morale of a wider group of students; the situation becomes less threatening for relations between students and faculty and still more faculty are brought into the interaction system. Of course, there are processes which would tend toward restoring a stable equilibrium at some point, but it seems plausible that such movement, once begun, could continue a considerable distance.

To test such a model of reciprocal relationships would require time lapse data, ideally with many measurement points a short time between each other, and this is very seldom collected. The interesting question here, however, is the implications of such a model for attempts to change political science departments in a desired direction -- presumably toward the Type I end of the continuum. It seems likely that once a department begins movement in a particular direction, actions intended to slow down that movement or reverse it will be particularly difficult, and the more so the further the process has gone. For example, in a department where there is little interaction between students and faculty, wildly inaccurate perceptions of each other, low student morale and widespread student dissatisfaction, actions by either group toward the opposite state of affairs are likely to be misunderstood; the initial movement becomes a self-fulfilling prophecy regardless of the intentions of the various actors.

In the extreme situation of this kind, perhaps only extreme measures can reverse the movement: a department head might change, or some faculty and students either resign or "opt out" of the system. However, in less extreme circumstances it seems likely that fairly subtle changes in orientation among some actors in the system might have a disproportionate effect. Our analysis has emphasized the importance of open and easy interaction between faculty and students. We

are concerned, of course, primarily with interaction on intellectual matters although social interaction might -- or might not -- go with it. If the role of "faculty member" was understood by its occupants to extend beyond a narrow conception of "professor" or "researcher," to a wider conception of participant in a social system designed to encourage free and open intellectual exchange, major changes in behavior might follow for both faculty and students.

While we do not mean to underplay the importance of student participation in departmental decision-making (which we heartily endorse), we suspect it is less a cause of student satisfaction than a consequence of student dissatisfaction. One major condition students want seems to us to be a good organizational climate, and that cannot be legislated into existence. Similarly, we suspect that the intricacies of formal program requirements are not too important since a good organizational climate seems likely to be compatible with a variety of program requirements. The thing that does seem to be important is the pattern of human relationships between members of the department -- students and faculty -- and that depends very simply on their willingness to engage each other in a productive way from day to day.

TABLE 1

Awareness of the Caucus for a New Political Science, by Year in the Program and Type of Department (by percent)

	Year in the Program		
	First Year	Second Year	Third Year and Beyond
Type I departments	78.5 (28)	89.4 (27)	94.8 (47)
Type II departments	63.1 (19)	72.7 (11)	78.7 (49)

TABLE 2

Satisfaction with what Political Scientists are doing, by Year in the Program and Type of Department*

	Year in the Program		
	First Year	Second Year	Third Year and Beyond
Type I departments	1.780 (28)	1.070 (27)	1.650 (47)
Type II departments	2.059 (19)	1.566 (11)	1.958 (49)

*Means from a five-point scale with 1 low and 5 high.

TABLE 3

Differences between Faculty and Students in Successive Years of the Graduate Program, by Type of Department*

	Year in the Program		
	First Year	Second Year	Third Year and Beyond
A. Attitude toward classified research:			
Type I departments	.997	.312	.675
Type II departments	.637	.201	.326
B. Feelings about Caucus for a New Political Science:			
Type I departments	1.109	..827	.754
Type II departments	.446	.063	.602

*Differences between mean scores from five-point scales.

Footnotes

1. Most importantly, Norman Luttbeg and Melvin Kahn, The Making of A Political Scientist: An Empirical Analysis of Ph.D. Programs, Public Affairs Research Bureau, Southern Illinois University, 1969; Committee for an Exploratory Study of Graduate Education in Political Science, Obstacles to Graduate Education in Political Science, delivered to the 65th Annual Meeting of the American Political Science Association, New York, 1969.

2. We are grateful to Professors Luttbeg and Kahn for access to their data.

3. We used the "elementary linkage" technique designed by Louis McQuitty, "Elementary Linkage Analysis for Isolating Orthogonal and Oblique Types and Typal Relevancies," Educational and Psychological Measurement, 17 (1957), 207-29. This technique defines a "type" as a subcategory of n variables (or, in the case of Q analysis, n cases or individuals) of the nature that all variables in the subcategory are more like each other than they are like any other variable in any other subcategory. In this preliminary analysis we clustered variables not departments; thus, our clusters indicate how certain departmental characteristics go together, not how similar various departments are.

4. Our response rates varied between 37% and 65% for graduate students and between 23% and 87% for faculty. We believe these rates are acceptable since we worked from lists of students in each department that undoubtedly contained much "slack" and were less than perfect as sample frames. Many did not distinguish students who were on leave or whose enrollment in the department was pro forma. There were also, of course, many students included who were absent from the department working on dissertations and even some who had graduated. Wherever possible our contacts in the various departments helped us identify such cases. We feel that the response figures are a conservative reflection of our actual response from students taking courses full time in the department. As usual in surveys, we have no reliable way of knowing the characteristics of those who did not respond -- although a reasonable guess is that their involvement in the department was more marginal than those who did respond.

Departments were selected from the four types according to the availability of faculty contacts there. Such contacts, and the student contacts who helped us with the administration of the questionnaire, were important if we were to have the active cooperation of people in the department. Although we will not report the findings by department name, we feel that the face validity of our final list as a representative sample of graduate departments is persuasive. Our sample of students, therefore, may be regarded as a crudely stratified two-stage sample in which the first stage was of departments and the second was an attempt at a complete enumeration of the relevant population (students and faculty). We argue that our sample is likely

to be broadly representative of both departments in the profession and individual members, both students and faculty. We believe it is the best we could do with our limited resources.

5. Our study design included sociometric questions linking students and faculty to others in the department (students and faculty in both cases) so it is also possible for us to relate individuals to their "intimate" interpersonal environment as well as more "global" or "analytic" characteristics of their departments. However, we have not reported analysis from these data in the present paper. For a useful example of "contextual" analysis that uses both interpersonal contextual data and more remote organizational measures, see: Ernest Q. Campbell and C. Norman Alexander, "Structural Effects and Interpersonal Relationships," American Journal of Sociology, 71 (1965), 284-89. Contextual analysis -- as Blalock points out -- is "not a substantive theory at all but rather a 'meta-theory' suggesting how variables might be expected to combine." (H. Blalock, "Status Inconsistency, Social Mobility, Status Integration, and Structural Effects," American Sociological Review, 32 (1967), 790-801. Its distinguishing characteristic is the inclusion in the same data-set of measures of individual characteristics and measures of the context of those individuals -- interpersonal, organizational, or physical. The best paper setting out "how contextual variables might be expected to combine" is by James A. Davis, Joe L. Spaeth, and Carolyn Husen, "A Technique for Analyzing the Effects of Group Composition," American Sociological Review, 26 (1961), 215-25.

6. McQuitty, "Elementary Linkage Analysis."

7. C. E. Bidwell and Rebecca S. Vreeland, "College Education and Moral Orientations: An Organizational Approach," Administrative Science Quarterly, 8 (1963), 174.

8. Orville G. Brim, Jr. and Stanton Wheeler, Socialization After Childhood (New York: John Wiley & Sons, Inc., 1966).

9. Orville G. Brim, Jr., "Socialization Through the Life Cycle," in Orville G. Brim, Jr. and Stanton Wheeler, Socialization After Childhood (New York: John Wiley & Sons, Inc., 1966), p. 36.

10. Brim, "Socialization Through the Life Cycle," p. 36.

11. Brim, "Socialization Through the Life Cycle," p. 36.

12. Brim, "Socialization Through the Life Cycle," p. 34-5.

13. Stanton Wheeler, "The Structure of Formally Organized Socialization Settings," in Orville G. Brim, Jr. and Stanton Wheeler, Socialization After Childhood (New York: John Wiley & Sons, Inc., 1966), pp. 53-116.

14. Wheeler, "The Structure of Formally Organized Socialization Settings," p. 73.

15. Percy H. Tannenbaum and Jack M. McLeod, "On the Measurement of Socialization," Public Opinion Quarterly, 31 (1967), 27-37.

16. Tannenbaum and McLeod, "On the Measurement of Socialization," p. 30.

17. One department was excluded because its faculty decided that research conducted on political scientists -- rather than by them on other people -- violated personal privacy. Another was excluded because it had such a small student body and such a small number of faculty that, after the response rate was taken into account, there were too few cases to deal with. These department-level variables based on mean scores can be classified "analytical" variables in the scheme developed by Paul F. Lazarsfeld and Herbert Menzel. They are distinguished from "global" variables which are based on properties of the entire organization -- for example, its decision-making structure. Analytical variables are based on properties of the individual members of the organization, and these values are then aggregated to form a summary measure for the whole unit. Analytical variables (as in the present case) characteristically measure the distribution of some property among the members of the organization. See: Paul F. Lazarsfeld and Herbert Menzel, "On the Relation between Individual and Collective Properties," in Amitai Etzioni, Complex Organizations: A Sociological Reader (New York: Holt, Rinehart & Winston, 1961), pp. 422-40. Other writers have discussed the problem of measuring such properties of educational units, most relevantly: Alan Barton, Organizational Measurement and its Bearing on the Study of College Environments (New York: College Entrance Examination Board, 1961); Paul F. Lazarsfeld and Wagner Thielens, The Academic Mind (Glencoe: The Free Press, 1958).

18. McQuitty, "Elementary Linkage Analysis."

19. The means and standard deviations of these questions, all of which were measured on a five-point scale, were:

Formality of relationships:	$\bar{X} = 3.316$	$s = .591$	High = 1
Graduate student morale:	$\bar{X} = 2.908$	$s = .557$	High = 1
Frequency of collaboration:	$\bar{X} = 2.905$	$s = .477$	High = 1
Academic help from faculty:	$\bar{X} = 2.033$	$s = .315$	High = 1
Professors' concern for teaching:	$\bar{X} = 2.733$	$s = .552$	High = 1

These figures are, of course, the means and standard deviations for the mean values on the questions in the twelve departments.

20. Wheeler, "The Structure of Formally Organized Socialization Settings," p. 82.

21. Benjamin Fruchter, Introduction to Factor Analysis (Princeton, N.J.: D. Van Nostrand Company, Inc., 1954), pp. 61-73.

22. Edgar H. Schein, Organizational Psychology (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965), pp. 11-13, 63-65.

23. The means and standard deviations of the variables loaded on this cluster are:

Relevance of education for career:	$\bar{X} = 2.090$	$s = .251$	High = 1
Satisfaction with career progress:	$\bar{X} = 2.213$	$s = .219$	High = 1
Relevance program requirements:	$\bar{X} = 2.963$	$s = .294$	High = 1
Relevance of courses taken:	$\bar{X} = 2.319$	$s = .331$	High = 1

24. We should point out that not all of the student respondents were anticipating careers as professors of political science. In fact, 12.9% were planning careers in some other capacity. As might be expected, a higher proportion of Ph.D. students were planning professorial careers than M.A. students. Our data were collected in the fall of 1969 and the winter of 1970; we suspect that the proportion of students anticipating a career in a university post has declined since then as a realistic reflection of the job market -- although this is based on limited impressions from a small number of departments.

25. Kenneth D. Roose and Charles J. Anderson, A Rating of Graduate Programs, American Council on Education, One Dupont Circle, Washington D. C., 20036, 1970. Twenty-two schools are ranked by this report, including five of those we sampled. In these cases we assigned an ordinal ranking by their order of appearance. Ten further schools were listed in alphabetical order as having a ranking in a second group, and three of ours were included. These three were assigned the same ranking (in this case seven). A further list of twelve beyond that contained one of our schools and it was given a rank of eight. The remaining schools we sampled were not given a ranking from this publication, and we assigned them the same score at the bottom of our list.

26. The A.C.E. rankings we used are rankings by the "Quality of the graduate faculty." The report also rates institutions by the "effectiveness of the doctoral program" but departments are grouped into four broad categories which do not fit our purposes as well as the rankings by the quality of the faculty.

27. We were struck by the accuracy of student and faculty perceptions of where their department stands in the professional status ladder. We were also struck by the consensus that appears to exist within

departments between faculty and students on this matter; the correlation between student and faculty evaluations of their own graduate students was .955.

28. See, for example: Mason Haire, "Biological Models and Empirical Histories of the Growth of Organizations," in Mason Haire (Ed.), Modern Organization Theory (New York: John Wiley & Sons, 1959), chapter 10. According to Alan Barton: "Size is a major but ambiguous attribute of the social structure of organizations. Size itself has certain necessary, formal consequences for the possible range of interpersonal relations, of communication links, and of levels of authority as conditioned by spans of control. In any given study, classifying organizations by size also classifies them by certain kinds of communications, authority, and social relations patterns which are its consequences and which in turn have other effects: it is by no means easy to say what intervening variables or incidental correlates size indicates." Organizational Measurement, p. 39.

29. Earl McGrath, "Participation -- Yes," Humanist, (September-October, 1970), 33.

30. Committee for an Exploratory Study of Graduate Education in Political Science, Obstacles to Graduate Education.

31. John Bunzel, "Some Reflections on Student Participation and Representation," P.S., (Spring, 1970), 117-22.

32. Bunzel, "Some Reflections," 117.

33. A.S. Tannenbaum, Social Psychology of the Work Organization (Belmont, Calif.: Wadsworth Publishing Co., 1966), p. 39.

34. Chris Argyris, Personality and Organization: The Conflict between System and the Individual (New York: Harper & Row, 1957).

35. This is particularly true of communications between individuals at different authority levels in organizations. Harold Guetzkow has written that "A dominant feature of such nets (communications) is its directionality, in that orders usually flow vertically within the organization, from a few individuals at the top of the authority structure to the many individuals in its lower regions." Harold Guetzkow, "Communications in Organizations," in James G. March (Ed.), Handbook of Organizations (Chicago: Rand McNally & Company, 1965), p. 543. See also, Robert L. Kahn, et al., Organizational Stress: Studies in Role Conflict and Ambiguity (New York: John Wiley & Sons, Inc., 1964), pp. 190-192.

36. Tannenbaum and McLeod, "On the Measurement of Socialization."

37. We should point out, however, that we took some pains to encourage respondents not to give an answer when, in fact, they did not have an opinion. Our instructions at the beginning of the questionnaire pointed out that the middle category of our standard five-point continuum should be used for a neutral opinion, and that

there was a separate box for a D.K. "opinion." For an important discussion of this methodological-theoretical issue, see: Philip E. Converse, "Attitudes and Non-Attitudes," Unpublished Mimeo, Institute for Social Research, University of Michigan, 1966.

38. At the outset our intention was to collect panel data on our fourteen schools to permit the measurement of real change among individuals as they passed through the department. We were unable to continue beyond this first wave, however, because of funding problems, and this paper has relied on cohort analysis as a surrogate for real change data. For an excellent recent example of cohort analysis in political science, see: David Butler and Donald Stokes, Political Change in Britain (London: St. Martin's Press, 1969). See also: Norman Ryder, "The Cohort as a Concept in the Study of Social Change," American Sociological Review, 30 (1965), 843-61; Gosta Carlsson and Katarina Karlsson, "Age, Cohorts and the Generation of Generations," American Sociological Review, 35 (1970), 710-17. Cohort analysis involves particular problems in a time -- such as the present-- when the conditions surrounding measurement are changing very rapidly. It implies that students presently in their first year of graduate education will be similar to students presently in their fourth year. Clearly, students who are well advanced in the program at the present time are facing a world (professional, political and social) substantially different from that likely to be facing their successors in three years time. Our analysis by year in the program should be accepted with that caution in mind.

39. Virginia L. Olesen and Elvi W. Whittaker, The Silent Dialogue (San Francisco: Jossey-Bass, Inc., 1968), p. 254.

40. Charlotte Towle, The Learner in Education for the Professions; As Seen in Education for Social Work (Chicago: University of Chicago Press, 1954), p. 96.

41. R. L. Howe, "Role of Clinical Training in Theological Education," Journal of Pastoral Care, 6 (1952), 7.

42. Magoroh Maruyama, "The Second Cybernetics: Deviation-Amplifying Mutual Causal Processes," The American Scientist, 51 (1963), 164-79.

43. Maruyama, "The Second Cybernetics," 177.